

X(4240)[±]

$$I^G(J^P) = ?^?(0^-)$$

NODE=M216

OMITTED FROM SUMMARY TABLE

Spin and parity assignment $J^P = 0^-$ is favored over 1^- , 2^- , and 2^+ by 8σ and over 1^+ by 1σ , according to the four-dimensional amplitude analysis of AAIJ 14AG.

NODE=M216

X(4240)[±] MASS

NODE=M216M

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
$4239 \pm 18^{+45}_{-10}$	¹ AAIJ	14AG LHCB	$B^0 \rightarrow K^+ \pi^- \psi(2S)$

NODE=M216M

¹ From a 4-dimensional analysis when a second, lower mass resonance is allowed in the X(4430)[±] fit, with significance 6σ including systematic variations.

NODE=M216M;LINKAGE=AA

X(4240)[±] WIDTH

NODE=M216W

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
$220 \pm 47^{+108}_{-74}$	² AAIJ	14AG LHCB	$B^0 \rightarrow K^+ \pi^- \psi(2S)$

NODE=M216W

² From a 4-dimensional analysis when a second, lower mass resonance is allowed in the X(4430)[±] fit, with significance 6σ including systematic variations.

NODE=M216W;LINKAGE=AA

X(4240)[±] DECAY MODES

NODE=M216215;NODE=M216

Mode	Fraction (Γ_i/Γ)
$\Gamma_1 \quad \pi^- \psi(2S)$	seen

DESIG=1

X(4240)[±] BRANCHING RATIOS

NODE=M216225

$\Gamma(\pi^- \psi(2S))/\Gamma_{\text{total}}$	Γ_1/Γ
seen	

VALUE	DOCUMENT ID	TECN	COMMENT
seen	³ AAIJ	14AG LHCB	$B^0 \rightarrow K^+ \pi^- \psi(2S)$

NODE=M216R01
NODE=M216R01

³ From a 4-dimensional analysis when a second, lower mass resonance is allowed in the X(4430)[±] fit. No partial branching fraction quoted.

NODE=M216R01;LINKAGE=AA

X(4240)[±] REFERENCES

NODE=M216

AAIJ 14AG PRL 112 222002 R. Aaij et al. (LHCb Collab.)

REFID=55896